



September 2000

Volume 11, Number 2

## It is Time to Say Good-Bye

by Giovanni "Feed them Rice" Ranieri

- This is the last Seattle Steamer being published under my watch. After almost three years in this position, I will be retiring from the City of Seattle in January 2001 to pursue other interests.
  - As we go to press, a successor has not yet been named, and the process will likely take a few months to complete. The next chief, will inherit a technically capable and truly dedicated staff to work with on a daily basis. I would like to recognize some present and past employees for their contribution to the department and thank them all for their assistance and dedication.
  - Gloria Martin who retired last June, and has been replaced by Madonna Doucette. George Folta also retired in February 1999 and was replaced by Vic Hall. Larry Leet, Chris Villa, James McClinton, Duane Starr, and Evelyn Dunlop for licensing. A special thank you goes to my predecessor Don Gentry who was always there when I got into trouble with the database and who has probably heard more than his share of "I do not have much use for computers."
  - Will the Steamer continue next year? I hope so, but it must be recognized that because of the various projects we are pursuing, my successor may not have the time to continue the Steamer. Among these projects, I count moving to the Key Tower (early during the first quarter of 2001), a new computer program for DCLU, and a new organizational structure as the reasons I was able to publish only two issues in 2000.
  - What worries me most about the Steamer is that it has the tendency to become the project of one person, but to be successful, the Steamer will need a more diverse contribution. As I said in the first issue I edited, we all have stories that may help a colleague. Let us get it in writing!
- Having said that, I want to thank James Dorwin, George Folta, Chris Villa, James McClinton, David Planter among the contributors, with apologies to the contributors I have left out.
  - I also want to thank the fellow chiefs Dick Barkdoll, Jerry Shiffer, and Dennis Cornelius for their support.
  - Some of the things that happened in the last three years and some things which are in the pipeline are discussed below.
  - The Seattle Boiler and Pressure Vessel Code was revised in July 1999. The most notable change was the adoption of the fuel train portion of CSD-1 (Controls and Safety Devices for Automatically Fired Boilers). Two articles on this standard by the American Society for Mechanical Engineers follow in this issue.
  - The Refrigeration Regulations of the Seattle Mechanical Code were revised in August 1998.
  - Revisions to both the Refrigeration Regulations of the Seattle Mechanical Code and the Steam Engineer and Boiler Fireman License Law have been sent to Council after the period for comments from the public expired in June 2000. It is expected that the revisions will be incorporated into new ordinances early this fall. The proposed changes for both ordinance are summarized on our web site and the address is: <http://www.ci.seattle.wa>.

(Continued on page 3)

	Page
<i>It is Time to Say Good-Bye</i>	1, 3,4
<i>CSD-1, An Inspector's Overview</i>	2,3
<i>Engineering Requirements in BC</i>	3
<i>Repair Reminder (Reprint)</i>	4,5
<i>CSD-1, The Good, the Bad, and the Ugly</i>	5,6
<i>ASME QFO Qualifications of Boiler operators</i>	6
<i>Refresher Course</i>	6
<i>Tacoma Abolishes Boiler Program:</i>	special insert

*CSD-1, An Inspector's Overview* (by James Dorwin, Inspector, The HSB I & I Co.)

Having been conducting first inspections of newly installed boiler units since the inception of the ASME CSD-1 Code in 1998, I have noted many trends and encountered numerous anomalies. The ASME CSD-1 Code which became mandatory in Washington State commencing after December 1998 has proven to place every inspector, installer, and operator on a continual learning curve. My reasoning for creating this selection is mainly to share ideas and experiences related to this CSD-1 topic in anticipation of lessening the burden to all affected parties in the future.

CSD-1 requires that all boiler units which are served by CSD-1 have some sort of "Installers Report" created by either the installer or manufacturer (see CG-500). Currently, this is part of the CSD-1 Code which is mandatory, but is not clearly spelled out. It is my understanding that the State Boiler Board may be incorporating a clearly spelled out WAC addenda which may be accepted and included into the next edition of the State Boiler & Pressure Vessel Code. With the addition of this "Installer's Report" statement into the Code, it may also be stated that this "report" be presented to the inspector at the time of first inspection, which is stated in CSD-1 as a jurisdictional- accepted option. I have found the majority of non-CSD-1 compliance issues to reside in this category. I believe installing contractors are on this special "learning curve" as inspectors discover new installations with no paper work associated with the unit. If installing contractors leave their installer's report with the associated CSD-1 required OEM pamphlets (see CG-430) onsite near the boiler unit, the associated inspector can review this paper work onsite and eliminate the hassle and confusion of routing this report to the inspector later.

Another area of compliance routinely overlooked is concerning remote electrical safety shutdown switches (see CE-110(a)). It may seem to defy logic or other self-induced thought, but CG-110 clearly states that *all* boiler units, which fall into the CSD-1 scope, shall have these remote shutdown switches. Boilers under 400,000 BTU/HR are included in this requirement. I routinely discover boilers installed in perfect harmony, but without, our "friend," the remote electrical safety shutdown switch! The good news is that pool heater units under 400,000 BTU/HR complying with and listed under ANSI Z21.56 (which most are) and *all* "hot water heaters" as defined in the definition are excluded from this requirement.

These examples comprise the majority of CSD-1-related difficulties. It is possible, with CSD-1's vast complexity, to become "absorbed" into its mighty abyss. I have gathered that it is not the State's nor the Board's intent to create undue hardship on anyone by adopting and enforcing CSD-1. CSD-1 is primarily an "installer's guide" for safely installing boiler units. It contains vast amounts of technical jargon pertaining to controls and safety devices for boilers. By clarifying an inspector's role by mandating review of an "Installer's Report", this should send a message to installer's that *their role* is primarily to insure complete CSD-1 compliance.

Once an installer completes and signs an installer's report, it is intended to state that all CSD-1 requirements have been met by the installing contractor. With this said, the initial inspection conducted by the inspector may be as easy as performing a "paper work check" to verify compliance to CSD-1. On the other hand, should a boiler unit be installed by any organization or individual which appears unknowledgeable with the CSD-1 Code, a more thorough and extensive compliance check may be re-

(Continued on page 3)

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quired. The main intent is to place CSD-1 compliance on the manufacturer and installer of the boiler unit, but should there be any question as to the compliance of the unit, a more detailed review may be in order. I believe, that as each installing entity becomes acclimated to this new CSD-1 procedure, future installations should flow smoother and with less difficulties; hence, the “learning curve!”

When a boiler is ordered from the manufacturer, it must be *clearly* ordered with the appropriate CSD-1-compliant controls and safety devices. Manufacturers are not mandated to comply with CSD-1 like many would think, therefore it is the owner or ordering entity who must ensure the boiler leaves the factory with the appropriate CSD-1-compliant controls and safety devices. Many manufacturers are placing decals on the sides of boiler units indicating this compliance as well. It makes the entire compliance process much easier if the manufacturer identifies that they have verified compliance, as well as the installer by having completed their signed installer’s report. Hopefully, with time and patience CSD-1 will become “second nature” to everyone and the entire CSD-1 compliance issue will no longer be, “an issue.”

#### Engineer requirements in British Columbia (by Mike Pilling, C.Tech. Chief Engineer Molson Canada (Vancouver Brewery))

The Province of BC issues First, Second, Third, Fourth and Fifth Class Power Engineer Certificates of Competency. In BC, the Certificate is good for life, i.e. : the Engineer doesn't have to renew it every year. It is NOT a license, but more like a degree/diploma, in that it shows that you have met certain educational/experience requirements as outlined in the Power Engineers and Boiler and Pressure Vessel Safety Act. The syllabi of the five classes of Certificates are available online at <http://www.marh.gov.bc.ca/SES/>. The Act and Regulations specify how a steam plant is rated, and also dictates the number and classes of Engineers required to operate the plant.

*(It is Time to say Good-Bye Continued from page 1)*

us/dclu/news/

- This department began administering the new Gas Piping license from last May, and examinations are being given at a fast pace. The first person to pass the exam and to be licensed was Monty Peil. Good job Monty!
- Those interested in an overview of the program can look at our web site <http://www.ci.seattle.wa.us/dclu/news/gas.htm> but basically, persons engaged in the business of installing, altering, extending, or repairing gas piping in the City of Seattle will need a license before November 17, 2000.
- The format of the exam for the steam engineer and boiler fireman license was changed in June 1999, when we went from an essay to a multiple choice format. Our first victim there was Randy Chance who got a grade 3 Steam Engineer license.
- There is a proposal to change the refrigeration exam from the current essay type to a multiple choice format, much as it has been done for steam and gas piping. The due date is October 1st, 2000. More details on this change can be found on our web site at <http://www.ci.seattle.wa.us/dclu/news/refrigexam.htm>
- I mentioned before about a new computer system and moving. As of this writing, both items are pretty much at the “fluid” stage. We are working to incorporate electronic inspection reporting through a web interface in the new computer system, and we know that Boiler Inspection will be located on the 21st floor of the Key Tower Building,

(Continued on page 4)

(Continued from page 3)

while licensing will be on the 20th floor.

**That is all. Thank you for the support and...be safe!**

## 2000 ASME Pressure Vessels and Piping Conference in Seattle draws hundreds of out-of-towners



About 600 members of the American Society of Mechanical Engineers and affiliated societies convened at the Westin Hotel on July 23, 2000 for a week of technical presentations. About 40% of the attendants were from foreign countries. DCLU's own **Giovanni Ranieri** was one of those with the privilege of welcoming the honored guests to the Conference. You can see him in action while putting a good word for the jurisdictions, and explaining that the **City of Seattle has had a Boiler Code since 1907**. A copy of the 1907 code was on display and generated a lot of interest.

## REPAIR REMINDER

BY James Dorwin

Recently, we had a situation that prompts me to reprint an article which appeared in March of 1999.

As everyone who owns or maintains pressure vessels in this state *should* know, welding is not permitted on pressure vessels by organizations, or individuals, unless they are properly qualified in accordance with the local jurisdiction requirements. Here in Washington, the jurisdictions have established National Board requirements for repair to pressure retaining items. As stated in the 1995 NBIC (*National Board Inspection Code*), you must hold a valid "R" Stamp acquired from the National Board. In addition, the state will allow organizations who hold ASME Stamps, and who have acquired an "authorization" letter from the state, to repair vessels as defined in the letter. There are many specific requirements which go along with these stamps as well, such as welding qualifications and inspector involvement, which *must* be strictly adhered to. These codes and standards have been adopted across the world due to the severe consequences which *can* and *have* occurred with pressure retaining items throughout time.

The NBIC (RA-2120) states that in order for an organization to receive an "R" Stamp, the organization , "**a. shall have and maintain an Inspection Agreement with an Authorized Inspection Agency, b. shall have a written Quality System which complies with the requirements of this section and includes the expected scope of activities, c. have the current edition of the National Board Inspection Code, and d. have available a copy of the code of construction appropriate to the intended scope of**

(Continued on page 7)

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### ***SPECIAL ANNOUNCEMENT: CITY OF TACOMA ABOLISHES BOILER PROGRAM***

The City of Tacoma has sent a letter to all their licensed steam operators to inform that their boiler program has ceased to exist. The letter points out to the reciprocity agreement with the City of Seattle. Those persons holding a **current** and **valid** Tacoma license can make use of this reciprocity agreement to obtain a Seattle license. A copy of the letter can be found on the back of this special announcement.

**Please note that the City of Seattle is *not* taking over the licensing program of the City of Tacoma. Do not send us City of Tacoma renewal forms!**

Information on the reciprocity agreement can be obtained from this site:

**<http://www.ci.seattle.wa.us/dclu/news/tacomaab.htm>**

This site has several links, including one to the Seattle Steam Engineer and Boiler Fireman License Law, which is the basis for the open book test. **It is recommended that you become familiar with this document before applying for a reciprocal license.**

Persons interested in using the reciprocity agreement **must make an appointment to take the reciprocity test.** This can be done by calling Evelyn Dunlop at (206) 684-5174 or by contacting her at [evelyn.dunlop@ci.seattle.wa.us](mailto:evelyn.dunlop@ci.seattle.wa.us)

Given the high volume of requests, it is suggested that you determine the following before calling:

- 1) Since after September 11, 2000 a license is no longer required to operate boilers in the city of Tacoma, you must first determine if you need a license for other reasons such as a condition for employment, and
- 2) The date of expiration.

Precedence will be given to persons whose employer requires a license as condition for employment and whose license is about to expire. All Seattle boiler licenses expire on September 30 of each year.

It should be noted that a Tacoma Grade 3 license corresponds to a Seattle a grade 4, and that a Tacoma Grade 4 license corresponds to a Seattle grade 5. Those wishing to convert their Tacoma grade 3 or grade 4 license into Seattle grade 3 or grade 4 license will be required to take the full Seattle written and oral exam.

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*September 8, 2000*

*To: City of Tacoma Licensed Boiler Operators*

*Effective September 11, 2000, the City of Tacoma will no longer have the authority to license Boiler Operators. Ordinance #26683 passed by the City Council on August 29, 2000, has repealed those sections relating to the Boiler Inspection Program in its entirety. The Boiler Inspection Program will be transferred to the State Department of Labor and Industries and the Tacoma Boiler Operator Licensing will cease.*

*The City of Seattle has a reciprocity agreement with Boiler Operators holding a valid Tacoma License. Seattle's Department of Design, Construction and Land Use can be found on the web at the following address: [www.ci.seattle.wa.us/dclu/Enforcement/Boiler/ recip.htm](http://www.ci.seattle.wa.us/dclu/Enforcement/Boiler/ recip.htm)*

*Information on renewals, as well as general questions concerning the program are found at this site. For additional information, you may call Evelyn Dunlop, City of Seattle, at (206) 684-5174.*

*For additional questions concerning this transition, please contact Sandy Reese, City of Tacoma Building and Land Use Services, (253) 591-5022.*

*Sincerely,*

*Gary L. Pedersen, C.B.O., Manager  
Public Works, Building and Land Use Services*

(Continued from page 4)

work.” The ASME Code has very similar requirements which must be met as well to receive an ASME Stamp. So as you can see, an Inspector *and* a written Quality System must be utilized. Failure to use either of these sources is unacceptable. A written Quality System is in place because it contains all pertinent information which will guide the organization into making *legal* and *safe* repairs. The Inspector is in place to ensure all Code requirements for the repair are met. Bypassing any or both of these requirements is not only illegal, but unsafe.

By obtaining either an “R” or an ASME Stamp, the organization has accepted all the applicable requirements associated with these Code standards. NBIC RC-1060 states: “*The Inspector’s authorization to perform a repair or alteration shall be obtained prior to initiation of a repair or alteration to a pressure retaining item.*” This means **all** repairs. The NBIC states other specific requirements which pertain to “Routine Repairs” and regular (i.e. non routine) repairs. But in **both** cases, the Inspector **must** be contacted and an exchange of communication must take place **before** the repair or alteration begins. Although this sentence in the NBIC does not specifically state *who* is responsible for contacting the Inspector, it is reasonable to assess that the organization performing the repair or alteration should be the contacting party. If an Inspector has specific detailed Code requirements for the job, who better to receive them than the repair organization (specifically the supervisor or welder). If the owner (customer) of the vessel performs the contacting function, will they deliver the *correct and complete information*? The possible answers to this question are, 1) maybe, 2) no, or 3) yes. If you were the repair organization, would you even want to risk receiving answers 1) or 2)? So, to make matters 100% foolproof, contact the Inspector yourself prior to beginning the repair or alteration.

As we all know, the consequence of an improper or unauthorized repair means money; and even worse, jeopardizing safety. So, to make things right and safe, follow your Quality Manuals, as they are written and always obtain acceptance from the Inspector before commencing the repair.

## CSD-1, the Good, the Bad, and the Ugly

by Giovanni

In the City of Seattle, adoption of CSD-1-1998 relates primarily to two parts of this document. Part CG-General, because of the various general requirements, and exclusions, and Part CF-Combustion Side Controls.

There are two sentences in paragraph 170.1.2 of the Seattle Boiler and Pressure Vessel Code that I would like to highlight, namely:

*.....Except as otherwise stated herein, all fossil fuel fired boiler installations with fuel input ratings of less than 12,500,000 Btu/hr shall comply with the fuel train requirements of A.S.M.E. CSD-1-1998, Controls and Safety Devices for Automatically Fired Boilers (CSD-1),.....When any conflict exists between CSD-1 and this code, the requirements of this code shall prevail.*

So, our adoption is restricted to the fuel train requirements, and, in case of conflict, it is the Seattle Boiler and Pressure Vessel Code that governs. This means that for combustion air, emergency shut-off switches, venting, etc. the requirements are in the SBPV Code. And that includes the fuel piping, where the requirements of Chapter 13 of the Seattle Mechanical Code (Appendix D of the SBPV Code) take precedence over the requirements of CSD-1

(see Exemption G of 170.1.2.1).

The other position which we have adopted is that the documentation required by CSD-1 is a good thing, but it does not mean that we are not going to determine by ourselves if the boiler complies or does not comply with CSD-1. In other words, we are going to test those controls before finalizing the installation permit. And we are going to test them again at the annual inspection, and we assume that the insurance inspectors will do the same thing. After all, we are all reading from the same page, namely Section 230.1 A, which, among other things, says:....***All required boiler controls and safety devices shall be tested during the external inspection to determine that they are operating properly.***

Most of the questions I get on CSD-1 have to do with CF-190 Atmospheric Vents and Gas Vent, Bleed, or Relief Lines.

It seems to me that CSD-1 differentiates between *atmospheric* vents which are essentially devices used to bring atmospheric pressure to balance a diaphragm, and *other* vents which are used to carry a product to a safe location. Under normal operating conditions, atmospheric vents do not carry product to a safe place. They may be manifolded provided that the cross-sectional area of the manifold is not less than the largest vent line plus 50% of the areas

(Continued on page 8)

(Continued from page 7)

of the additional vent lines, but atmospheric vent lines cannot be connected or manifolded to any gas vent, gas bleed or safety valve discharge line.

Means to prevent blockage by foreign material, moisture, or insects must be provided at the termination point of all vents, atmospheric or not. Some gas vents and bleeds may be terminated to a **constant** burning pilot, but I would encourage readers to read the full text of CF-190 to determine what applies to their circumstances.

## ASME – QFO Certification of Boiler Operators

This new certification program will cover operators of oil, gas and coal fired boilers with heat input greater than 10,000,000 Btu/hr. Certification criteria will include evaluation of qualifications in both safety and air emission. Dates of the first examination will be announced in the last quarter of 2000. For more information the ASME web site is:

<http://www.asme.org/cns/departments/AccredCertif/QFO.htm>

## REFRESHER COURSE by Giovanni

Since January 1, 1998 you must attend a refresher course **every five years** to renew your **steam license**. In addition, renewal of a **steam license** which has been expired for more than one year requires the holder to attend a refresher course. In either case, a **document** indicating proof of completion of the course, must **be submitted** to this department.

I stressed a few words above, because we are experiencing some problems. First, the refresher course applies only to **steam licenses**. **If you have never had a steam license or have a refrigeration or a gas piping license read no further.**

Second, the refresher course must be taken **every five years**. We count the time to establish the date of the next refresher course from the date you took your last one. If your renewal form gives the date of 09/30/2004 it means that you have until 09/30/2005 to submit proof of completion. If you jump the gun, and you take the course in 2000, the date of your next refresher will not change, e.g. you have wasted time and money (but you have gained some knowledge.)

Finally, the **proof of completion must be readable**, and, possibly, **have your license #** so that we know whose Smith the certificate belongs to. We get photocopies of photocopies where making out your name is impossible.

Thanks for your help!

The *Steamer* is generally published quarterly by the City of Seattle, Department of Design, Construction & Land Use, Boiler Pressure Systems Inspection Section. The intent of the publication is to provide information to interested persons in related fields. Readers are welcome to submit material for publication (subject to approval). Any materials submitted for publication will become the property of the Department unless prior arrangements are made. Readers are welcome to reprint any original material (the copyrights of others must be respected); we ask only that you credit the *Steamer* as the source.

## Washington State Boiler Inspectors' Association

**Chris Villa**, Chair (206) 684-8460  
City of Seattle, DCLU

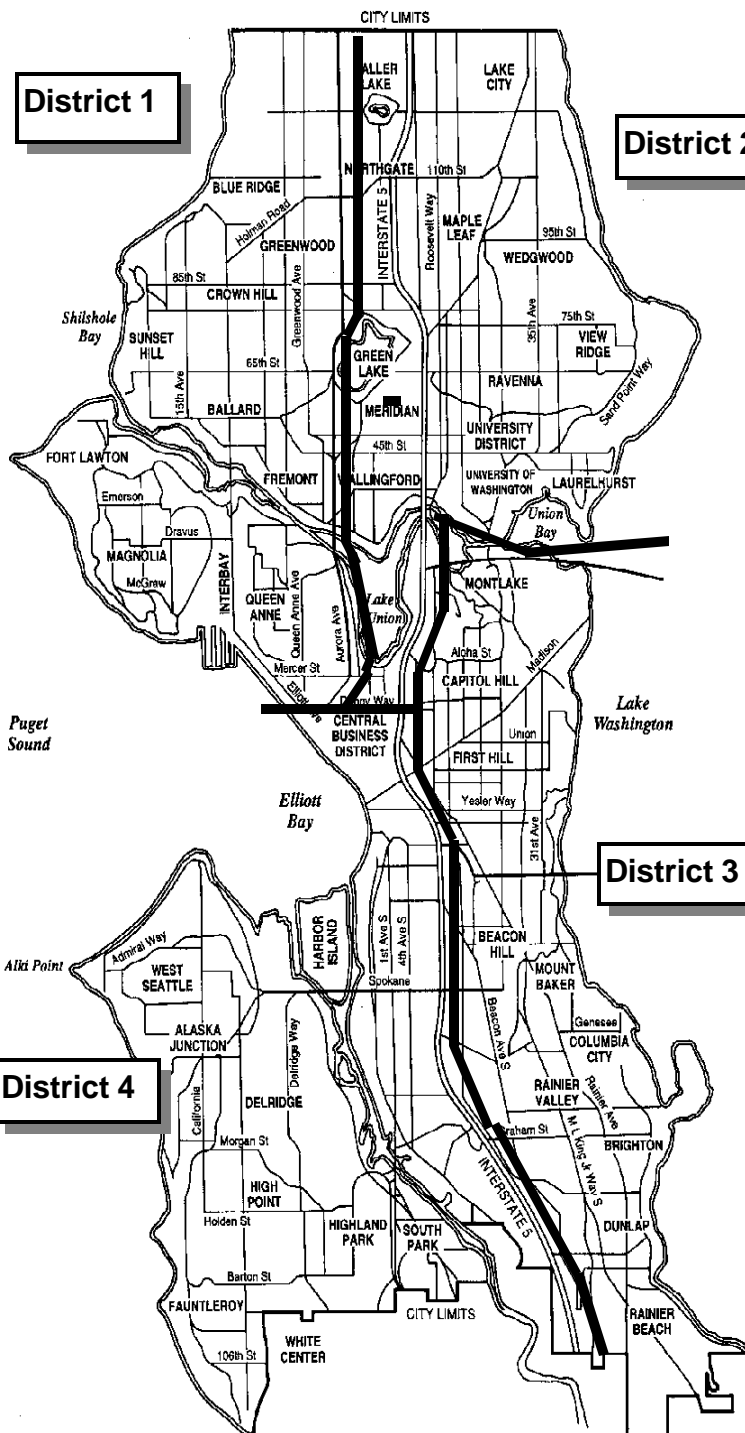
**Tim Swanson**, Vice Chair  
(206) 248-8287 State of Washington L&I

Zachary Sargent, Secretary/Treasurer  
(253) 752-0222 Hartford Steam Boiler

**Monthly Meetings** are held on the first *working* Monday of each month at Andy's Diner, 2963 - 4th Ave S., approximately two blocks north of Spokane Street. From I-5, take the Spokane Street exit, stay to your right, take the 4th Ave S. exit, then north a few blocks to the restaurant which will be on your left. Lunch is at noon and the meeting is called to order at 12:30 PM.



## Inspection Districts in Seattle



### INSPECTORS

District 1	Chris Villa	(206) 684-8460
District 2	Vic Hall	(206) 684-5366
District 3	James McClinton	(206) 684-8462
District 4	Larry Leet	(206) 684-8461

## Telephone Number Reference

### Seattle Dept. of Design, Construction & Land Use Boiler Inspectors

Chris Villa	206-684-8460
Vic Hall	206-684-5366
James McClinton	206-684-8462
Larry Leet	206-684-8461
FAX	206-233-7902

### Chief Boiler Inspector/Licensing Supv

Giovanni Ranieri 206-684-8459  
email: giovanni.ranieri@ci.seattle.wa.us

### Administrative/Inspection/Billing Info

Madonna Doucette 206-684-8418  
email: madonna.doucette@ci.seattle.wa.us

### Steam/Refrigeration License Info/Exams

Evelyn Dunlop 206-684-5174  
email: evelyn.dunlop@ci.seattle.wa.us

### Seattle Public Utilities Department

#### Back Flow Prevention Questions/Insp.

Karen Lanning	206-684-7408
Bob Eastwood	206-233-2635
FAX	206-684-7585

### Plumbing Inspection In Seattle

Dick Andersen, Chief	206-233-7914
Ginger Ohrmundt, Permits	206-684-5198
Inspection Requests	206-233-2621

### State of Washington Boiler Inspection

#### Olympia - Main Office

Dick Barkdoll, Chief 360-902-5270  
email: boiler@localaccess.com

#### Administrative/Inspection

Pat Carlson-Brown	360-902-5271
FAX	360-902-5292

#### Bellingham

Linda Williamson 360-647-7317

#### Bremerton

Karen Boyd 360-415-4038

#### Everett

Tony Oda 425-290-1345

#### Kennewick

Tom Danielson 509-735-0118

#### Olympia

Robb Marvin 360-902-5267

#### Spokane

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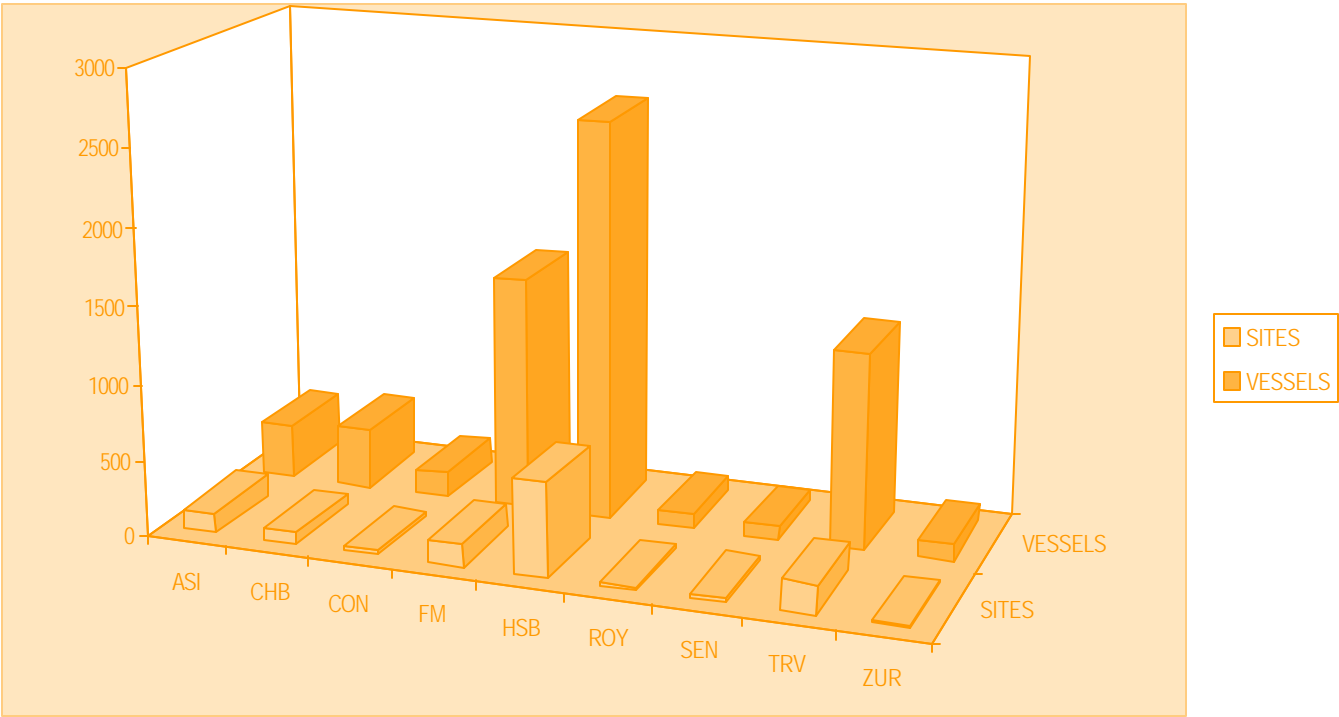
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#### Vancouver

Ed Hovatter 360-896-2359

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